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Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/534,108
Filing Date: April 12, 2006
Appellant(s): FAYE ET AL.

Mr. Gerard Messina
For Appellant

EXAMINER'S ANSWER

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

This is in response to the appeal brief filed 07/14/2008 appealing from the Office action mailed 01/10/2008.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 2,933,359	RASKIN, F.J.M.	04-1960
US 6,311,950	KAPPEL et al.	11-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19, 20, 22-26, 28, 29, 36 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Raskin (US 2,933,259).

In regard to Claims 19, 20, 22-26, 28, 29, 36 and 38, Raskin (US 2,933,259) teaches a dosing device for a liquid fuel having at least one metering device that is configured to meter fuel into a metering conduit and a nozzle body (Figure 1, 2, 3 and 4; Column 2 Line 60-Column 4, Line 70) that adjoins to the metering conduit has different diameter spray discharge openings (21,22) that open into a metering chamber where the nozzle body projects with a spherical portion (Figure 2) at a spray discharge end into a metering chamber, having spray discharge openings distributed over the spherical portion of the nozzle body where the nozzle body is shaped in a hollow cylindrical fashion at an end facing the metering conduit (Figure 1 and 2) and is threadedly engaged with the metering conduit (Figures 1, 2 and 3) where the spray

discharge openings have a common intersection point (Figure 2) that is located on a center axis of the nozzle body (Figure 2) and located such that the openings and tilt are asymmetrical with respect to a center axis of the nozzle body (Figure 2). Raskin also teaches where a metering conduit has at least a reduced wall thickness and a reduced wall thickness region along an axial extent (Figure 1, 2, 3 and 4; see also Response to Arguments 35 USC § 102(b) section below) and an air inlet with which a gas can be introduced into a metering conduit (Column 3, Lines 52-67) where the dosing device of Raskin is capable of being adapted to input the fuel into a chemical reformer to recover hydrogen.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 19, 21 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raskin (US 2,933,259) in view of Kappel et al. (US 6,311,950).

In regard to Claims 19, 21 and 37, Raskin discloses the claimed invention except for welding the nozzle body through laser welding to the metering conduit. However, Kappel et al. (US 6,311,950) teaches that it is old and well known in the art to utilize laser welding as another form of securing and attaching separate pieces of material

together in a rigidly fastened manner. Therefore, it would have been obvious to one having ordinary skill in the art at the time the present invention was made attach the nozzle body to the metering conduit of Raskin with the laser welding techniques of Kappel et al. in order to securely fasten two pieces of material together to prevent air gaps.

(10) Response to Argument

Rejection under 35 USC § 102(b)

Appellant's arguments filed 07/14/2008, with respect to Claims 19-21, 25 and 28-30 have been fully considered and are not persuasive. Examiner is maintaining the rejection of Claims 19, 20, 22-26, 28, 36 and 38 held under 35 U.S.C. § 102(b) as being anticipated by Raskin.

As stated in the Office Action Correspondence mailed 07/17/2007, 01/10/2008 and 04/04/2008, Appellant's assertion that the spray discharge openings of Raskin do not open directly into a metering chamber is unfounded. As clearly seen within Figure 4 of Raskin, the metering chamber into which fluid flows from the spray discharge openings "21", "22" communicate unobstructed to a metering chamber and at least some fuel travels directly into the metering chamber passing through "24" unimpeded. The device of Raskin clearly implies operational use of the device for metering fuel into a metering chamber. In as much as Appellant's metering chamber "10" in Figure 1 of the present invention is a metering chamber where fuel is sprayed into "10" so is

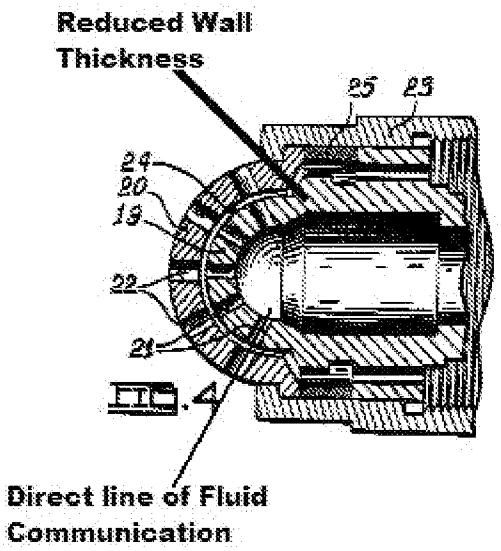
Raskin, as the liquid fuel traveling from "4" (fluid is metered down due to changes in diameter through “4”) through and exiting from openings "21" and "22" into a metering chamber. The present invention is used with a fuel injector as depicted in Figure 1 for spraying into a combustion chamber that is likened to a metering chamber in that it receives a metered amount of fluid from the fuel injector metering device (metering device of Raskin is the gradually stepped down area leading up to the openings “21” and “22” as clearly shown in Figure 4) into a chamber that receives the metered fuel out of spray openings into a “metering chamber”. Examiner asserts that Raskin performs the same function as the present invention in its field of endeavor.

Examiner brings to Appellant's attention that the Raskin reference is used within the burner art and that fuel in the burner art implicitly requires a chamber for which liquid is sprayed into where only a certain amount of liquid can be filled or metered in a chamber to facilitate a combustion process through admixing of fuel with air. Raskin explicitly describes the use of the apparatus with combustion components (i.e. fuel, oil and air to be mixed for sprayed atomization out of “21” and “22”) that require an enclosed space to facilitate combustion (i.e. a large concentration of volatile components in a small volume of space as required by application the size of the engines/burners. Raskin also teaches use with smaller burner applications that require less atomization and spray mixing with combustion components.).

The "direct fluid communication" limitation is viewed in its broadest sense and Examiner further clarifies that the openings “21” and “22” provide a direct line of fluid communication into the metering chamber. Appellant is again directed to Figure 4

where there is nothing obstructing the openings of "21" or "22" into a metering chamber. The gap "24" does not obstruct the path of at least some of the fluid flowing through "21" and "22" which can flow directly into the metering chamber directly (unobstructed) when the fluid is subjected to operating pressure. Examiner also makes note to Appellant that a direct line of communication can be established through the central line axis's of the spray discharge openings to the metering chamber where fluid can travel along the center line axis's of the spray discharge openings into a metering chamber.

Examiner further brings to Appellant's attention that the Raskin reference teaches the "reduced wall thickness" limitations of Claim 19. The reduced wall thickness of Raskin is thinner and would dissipate heat or decrease the thermal conductivity of the metering conduit. In viewing Figure 4 of Raskin, one can clearly see that reference number "19" has a number of points of reduced wall thickness, that "reduce" from a thicker section of wall thickness (see just above "21" on both sides of "19") to a transition or necking area into the lower portion "19". The reduced wall thickness as described is in the same location as that of Appellant's and therefore is similarly taught and disclosed within Raskin and would perform the same decrease in thermal conductivity of the metering conduit function of the present invention. It is also noted that at least a portion of the reduced wall thickness of Raskin composes the metering conduit.



Thus, for the aforementioned reasons, Examiner maintains the rejection held under 35 USC § 102(b) to Raskin against Claims 19, 20, 22-26, 28, 36 and 38.

Rejection under 35 USC § 103(a)

Appellant's arguments filed 07/14/2008 have been fully considered but they are not persuasive. Appellant has not shown or provided enough evidence as to why the applied rejection of Raskin in view of Kappel et al does not teach the limitations of Claims 21 and 37. Furthermore, one having ordinary skill in the art at the time the present invention was made would recognize the laser welding technique of Kappel et al to be routine and obvious. One having ordinary skill would also recognize a reasonable expectation of success by using the welding technique of Kappel et al in order to better secure the device of Raskin. Thus, Examiner maintains the rejection of Claims 19, 21 and 37 held under 35 U.S.C. § 103(a).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/T. E. M./

Examiner, Art Unit 3752

Conferees:

/Len Tran/

Supervisory Patent Examiner, Art Unit 3752

/Allan N. Shoap/
SPRE, TC 3700